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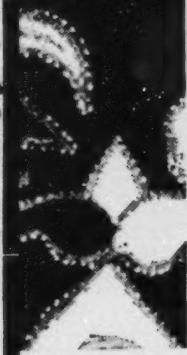
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ABSTRACT

This journal contains four articles about education in Indonesia, Nepal, Pakistan, and Thailand; reviews of five recent publications and studies; and an annotated bibliography of six documents on education in Asia. The first article reviews the history, weaknesses, and recent developments of curriculum in Indonesia. A short article describes programs of higher education for rural workers in Nepal, followed by an analysis of the structure, programs, and cost effectiveness of the People's Open University in Pakistan. The fourth article briefly describes a research-oriented doctoral fellowship program in Thailand. The reviews of recent publications present information and annotations about (1) work experience as part of the curriculum in India; (2) outcomes of primary education in the Philippines; (3) Singapore experimental schools; (4) an international symposium for literacy held in Iran in 1975; and (5) social and economic promotion of women in Iran. (AV)

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National Development Service of
Nepal

People's Open University, Pakistan

India: work experience built into
curriculum

Doctoral fellowship programme in
Thailand

Philippines primary education

Singapore experimental schools

Notes on Asian documents



UNESCO REGIONAL OFFICE FOR EDUCATION IN ASIA
BANGKOK, THAILAND

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Reviews, Reports and Notes

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BANGKOK

This publication contains special reports on educational developments, together with reviews and reports of recent documents selected from the collection of the Unesco Regional Office for Education in Asia. We invite officials of Asian Member States, members of international organizations and all interested readers to send recent publications for possible review or mention in the next issue, as well as information on new education policies or major programmes.

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CURRICULUM DEVELOPMENT IN INDONESIA

by C. T. Crellin

Background

For many years after independence, the principal aim and achievement in education was a very large increase in enrolment in schools, colleges and universities. By the 1970s, almost all communities were served by primary schools, and more than two million students were in secondary schools. The structure and practices of the school system did not differ significantly from those inherited from the Dutch colonial administration.

At earlier intervals, various attempts had been made to revise the various curricula, but the changes decreed were neither profound nor very effectively implemented. This truth was realized at the time when the first Five-Year Development Plan was prepared for the period 1969-1974 and, although the social sector was not the first priority at that time, significant first steps were made to solve the problems of the quality and quantity of educational opportunity. In particular, what was to become a major curriculum development project began in 1971 with the Development School Project. This project uses personnel from eight Colleges of Education, each of which supervises trials of new educational material in one school covering the entire age-range of the school. Also during the first Five-Year Development Plan, there was a large increase in the provision of in-service courses for teachers and some improvement to school facilities.

One of the factors that rendered most attempts to reform the school curriculum ineffective was a lack of clearly-stated objectives for the educational system at its various levels. There was also a lack of realism in much of the planning of education, due to a lack of knowledge of the true situation in the schools. The beginning of a solution to these problems was the National Assessment of Education in Indonesia carried out in the early 1970s. At the same time, a survey of requirements of education for Indonesian society was carried out. This survey invited leaders from many facets of Indonesian life to state what they believe

Note: A more complete and more technical account of curriculum development in Indonesia is available from BP3K of the Ministry of Education, Indonesia, written by Mr. Soediyarto, Director of the Curriculum Development Centre.

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the objectives of Indonesian Education should be. The outcome of these efforts was a deeper knowledge of the problems that face Indonesian Education and a list of General Objectives for Education that became the basis of the existing Curriculum Development Programmes.

The rapid growth in the number of schools and students since independence made it difficult to train sufficient teachers to the required standards. It is only comparatively recently that it has been realized that an expansion of the same system was not a sufficient response to the new situation. The wider range of students and teachers from different social and economic backgrounds made an extension of existing methods inappropriate. These factors had an important effect on the group planning of new curricula in the mid 1970s.

The development school project

From 1971 to 1973, each of the eight Colleges of Education involved in the project did work on the needs of society for the education system in their respective areas, and began trials of new courses and school systems in schools in the neighbourhood. They were guided by a directive of the Minister of Education and Culture, which gave general objectives based on the National Assessment and the Survey of Educational Objectives. These objectives had two main components. The first is based on the National Philosophy of Panca Sila, or Five Principles, which are belief in: Almighty God, One Nation, Internationalism and Humanity, Democracy, and Social Justice. The second type of objective referred to the need for education to be oriented towards development, and gave rise to attempts to prepare teaching programmes more relevant to the schools' environment with some emphasis on science, mathematics and the application of knowledge to societal development.

In 1973, the project was brought under the management of the Office of Educational and Cultural Research and Development (BP₃K). Previously it had been administered by the Directorate General of Education with direction from a Steering Committee of 11 educators. After a careful assessment of progress at each school, a new programme was developed and incorporated in a Master Design for the Development School Project which was completed in September 1973. Among the more important decisions made at this time were the following:

1. There would be one programme to be developed and tested at all eight schools.
2. The system would cater for students who enter and leave school after varying periods of time.
3. The teaching would be student-centred.
4. The system would involve 'continuous progress' for each student.

5. The curriculum would be structured around eight broad subject areas: Language, Social Studies, Mathematics, Science, Practical Arts, Cultural Arts, Physical Education and Religious Education.
6. Each teaching programme would undergo two phases of trial and rewriting with a target date for dissemination of the first tested programmes in 1979.

Serious consideration had been given to the teaching method to be used, and it was decided to use a self-instructional, self-paced modular system. The period from mid-1973 to early 1974 saw the development of a system of co-operation and involvement of colleges, universities, provincial education offices, and the Department of Education, all supported by a small proficient team from the Office of Educational and Cultural Research and Development. The methods of co-operation developed have contributed considerably to the relatively smooth progress of this complex project. When an important decision has to be made, there is usually a meeting involving up to 50 people where the problem is discussed and an outline of a proposal is prepared. This is then written into an operational document by a relatively small group, and then presented for sanctioning by a meeting of up to 150 specialists. Care is taken to involve people concerned with all aspects of education. In practice, several parallel decisions are often covered by sub-groups in the larger meetings.

In this way, Basic Course Outlines were completed in 1974 for Language, Social Studies, Science and Mathematics for all age levels. Counselling and guidance procedures, teacher education programmes and school administrative procedures are being developed in a similar manner.

One of the constraints imposed on the Curriculum team is the lack of experienced educators in all fields and for all levels of education. Until recently it has not been possible to engage full-time writers, largely because the colleges, universities and other institutions that at present employ potential writers cannot afford to spare them. Now, ten or more writers may be involved in any one subject area. The carefully sequenced and operationally specific Basic Course Outlines make it possible for a writer to prepare a module of instruction which fits well into the structure as a whole. In fact, most of the first group of writers were drawn from the team who prepared the Basic Course Outline and were therefore familiar with the philosophy and structure of the course as a whole.

The objectives stress understanding and the ability of students to use information, rather than the traditional pattern of requiring simple recall. Thus, students may study different habitats, when the objective of the module is concerned with the understanding of the interdependence

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of living things. This kind of objective is not amenable to traditional evaluation practices. In the example given, students may be asked the same question; for example, "Describe the food chain for a selected animal in the habitat you have studied." Two students who have studied the same habitat, for example a rice paddy, could choose different animals from the habitat and therefore give different answers. In another school the students may not have studied a rice paddy at all; they may have studied a tropical rain forest or a sea coast.

The specification of educational objectives - and the preparation of the Basic Course Outline on a sequential basis - provide both a specification of entry behaviour for the student working on a module, and a specified anticipated outcome. Thus individual modules are replaceable or capable of modification, without interference with the main structure of the course. Another benefit, as we have seen, is that it is possible to introduce modules relevant to life in different communities, and yet maintain a consistent national educational pattern. This would not be true if the objectives stressed the rote memorization of content material.

The modules now being tried consist of the following parts: (1) a student activity booklet; (2) a student worksheet; (3) a teachers' guide; (4) a test of achievement; (5) a key to the worksheet (for the students and teacher); (6) a key to the test (for the teacher); and (7) necessary equipment.

This may well change as the programme develops. In particular, the heavy dependence on reading as the communication skill of the learning system is now being alleviated by cassette tapes. At present the worksheets are retained by the student. This is expensive, and changes may be necessary so that the students can keep a record of their work in the usual school notebooks.

The tests are being used for diagnostic purposes so that the teacher can assess progress and guide the students' next stage of work, and also to assess the efficiency of the module. This course evaluation work is a heavy load on the curriculum team, but increasing use of a computer at the Office of Educational and Cultural Research and Development is helpful. Feedback from teachers supplements the hard data from the tests and both are used to indicate whether re-writing of modules is necessary.

Among the changes introduced in the Development Schools was a structure of a five-year primary phase, three-year junior-secondary phase and three-year senior-secondary phase. This indicated the need to start the writing and testing programme for the first year of each phase; i.e., years 1, 6 and 9. In addition, writing and testing was initiated for year 4, which is the year when a reasonable mastery of Bahasa Indonesia can be assumed. Trials started at all eight schools

for Language, Social Studies, Mathematics and Science in early 1975. By early 1976, these trials had proceeded to years 2, 5, 7 and 10 and a second trial had begun of modules, rewritten on the basis of 1975 experience, for years 1, 4, 6 and 9.

Now that the programme is developing satisfactorily for the four subject areas mentioned, attention is turning to Practical Arts, Cultural Arts, Physical Education and Religious Education. Basic Course Outlines have been prepared for each of these subject areas but much work will have to be done before trials of new teaching material can begin in 1977.

A weakness of the existing educational system is that the only clear goal is for college entrance. When attendance at Senior Secondary School was limited to an intellectual and social elite, this may have been appropriate. It is clearly not satisfying the needs of the students, nor of society, now that attendance at secondary schools is rising rapidly. Although a major effort is being made to increase enrolment and to minimize drop-out, it is only realistic to assume that, for some years to come, many students will pass from primary school to employment. Again many students will go to work at the end of the junior-secondary and senior-secondary phases. For this reason, special courses are being planned for years 6, 9 and 12 as possible bridges between school and employment. For students who, perhaps because of limited educational facilities in remote areas, may not have reached college entrance standards by the end of year 11, a pre-college 12th-year course may be developed. We know that, especially in rural areas, students drop out of school for relatively short periods, and it is thought that the self-instructional module system will enable these students to catch up on the missing work. This requirement of the teaching system is a justification for the modules' being built on a basic element, for which mastery is expected, supplemented by extra or enrichment material, for all but the least able and slowest learners. Thus a student can proceed quickly, if he is of average ability, by confining his attention to the essential basic course work until he has reached the appropriate academic level. The combination of providing for absence for long or short periods and providing for leaving school at various stages is called a Multi-Entry-and-Exit system. If this system can be established, we will refer to students as having completed the primary, junior-secondary or senior-secondary phases, and define as drop-outs those who fail to complete a phase.

This new educational system changes the role expected of the teacher. Up to this time, trial teachers have been carefully prepared with continuous support from the associated College of Education. A series of special modules has been written and used, first to teach the trial teachers about the system, and second as 'mini' courses (one lesson only) for teachers to use in small practice classes. These

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modules, one each on social studies, mathematics and science, deliberately introduce a number of situations unfamiliar to the teachers. There have been a number of problems so far; all have been solved or seem capable of solution. A sizable initial problem is that of preparing and distributing up to 15 new modules each week. This will disappear as a problem once a school has built up a library of modules to be used year after year. Another problem, capable of solution only after much re-writing, arose because a government programme to provide good laboratories and adequate equipment to all secondary schools was launched after much writing had already been done. Fortunately there is no need to change the Basic Course Outline; the range of resources to be exploited by science module writers gives a wider range of options of student activity than at present is incorporated in the science modules.

There has been some difficulty in preparing written material matched to the reading ability of the students. Much experience is now being gained and already much-improved modules are being distributed. Many teachers report a significant improvement in reading ability of the students, and material must be written which profits from this improvement.

For the immediate future, apart from a continuing effort to improve the material for the classroom and the administration of the system, work is now being done to prepare extensive pre-service and in-service teacher education courses. This work will have to be completed before widespread dissemination of the system can be contemplated. In the meantime, plans are being made for trials of the system in a number of schools throughout Indonesia. Only when we see results in rural and urban, large and small schools - and with limited supervision - can we press on with confidence to implementation in all schools of the country.

The 1975 curriculum

The second Five-Year Development Plan, which runs from April 1974, includes a considerable increase in investment in education. The most tangible effect of this so far has been the building of 16,000 new three-classroom primary schools and the rehabilitation of 10,000 standing primary and secondary schools. In addition, more than 1,400 new secondary school science laboratories have been built and are now being well equipped at a cost of about 14 million US dollars. Such a change in the material situation requires a new curriculum; yet the Development School Project will not have fully developed material before 1979. The answer was to prepare, in 1974 and 1975, a new curriculum incorporating those elements of the Development School Project that could be disseminated without too much difficulty and which could be implemented with confidence before trials were complete. This new curriculum,

adopted in January 1976, uses substantially the same Basic Course Outlines as the Development Schools, introduces some elective subjects for older students and requires that all students spend some time on skill development. Although the teaching method has not been changed, being still teacher-directed, teachers are being trained and encouraged to develop their teaching on a sequence of units to which a fixed time is allocated. This will prepare them for a possible change to the module system from 1980 onward.

The differences between the traditional curriculum, on the one hand, and the 1975 and Development School curricula, on the other, are substantial. In particular, the new curricula are more flexible, providing for variation between schools in different areas, and for variation between students within a school by the provision of electives. Whereas the traditional syllabuses listed topics to be taught, the new ones list both topics and the expected outcome of the learning system. Especially in the Development School system, a more realistic assessment of the capabilities of the education system, with particular regard to the teachers, has been taken. The aim is to give technical and pedagogical help to the teachers, yet preserve and develop the opportunities for them to build on the structure provided by the Curriculum Development Centre.

Thus the 1975 curriculum can be seen as an early derivative of, and a preparation for, the new curriculum being prepared in the Development Schools.

The re-modelling of the entire Indonesian School system is an enormous undertaking; few countries have attempted such a large-scale and profound modification of their educational system in one operation. There will be many difficulties and disappointments; there have already been some significant successes. The problem of changing the in-service and pre-service teacher education programmes is now receiving careful attention. There is little doubt that the effect of the work now going on will exercise able educators and administrators for the rest of the century.

THE NATIONAL DEVELOPMENT SERVICE (NDS) OF NEPAL

Higher education amidst the realities of rural work and living

Tertiary education in Nepal is divided into four stages: (1) Certificate earned after two years of post-secondary education; (2) Diploma, after a further two years; (3) Degree after a further three years, of which one year has to be devoted to compulsory National Development Service (NDS), and (4) Post-graduate.

The establishment of the NDS is part of a major effort to make a radical reform of Nepal's education system. It finds its legal basis in the Tribhuvan University Act of 2028 (1970-71), which decrees such service not only for Nepalese nationals studying at the University, but also for foreign nationals studying there, and for Nepalese nationals gaining degrees in other countries.

The two stated objectives of NDS are: (1) to allow students to experience the realities of the rural situation - thereby making higher education broader in its outlook, and more practical and attuned to the real development needs of Nepal - and (2) to give students the opportunity to help meet their country's development needs during their academic careers.

The students spend 300 days working in rural development activities, giving priority to school teaching in the villages to which they are assigned. In addition to this priority task, they are required to contribute in such fields as reforestation, health education, literacy teaching, agricultural extension, family welfare, and rural construction work such as for latrines, water supplies, roads and bridges.

Assigned under the direct control of the headmasters of the schools in which they teach, students are under the general supervision of the District Education Officers. NDS staff members, recruited from University faculty members, visit the students in their villages, and provide support and evaluation. Usually an NDS staff member would have between 20-50 students under his charge.

Each student receives a living allowance of Rs.300/- (US\$ 24) per month. Those in particularly remote areas are provided with a special allowance. A cash grant of Rs.500/- is provided for the students to equip themselves with a blanket, working clothes and shoes. These amounts may be compared with the Rs.325/- monthly salary of a school teacher without a degree or diploma, and that of a higher school headmaster of Rs.720/-

Participants who obtain their headmaster's consent are allowed a maximum of 10 days' casual leave (one or two days at a time, to be spent in the village), and 10 days' sick leave, during the 300 days of service. Additional days of leave may be granted during school vacations so that they can meet other NDS participants, usually within the District. Students found living at their homes are expelled from the scheme. Students wishing to leave the NDS before completing their service may obtain the NDS Director's consent to complete the service at a later date. Participants who leave without consent cannot return.

While the 1974-75 group of 212 students are now back at the University continuing their studies for a degree, the 1975-76 group of 433 students are at present working in villages scattered from the Kathmandu Valley to the remote Western border. As yet no systematic evaluation of the NDS has been conducted, and efforts are being made to improve individual student evaluations, eventually reaching a comprehensive grading scheme based upon making available a total of 80 marks or 8 credits that can be earned by NDS participants towards their degree. The 80 marks are divided among various aspects of the development service, in which school teaching carries 30 marks; village work, 25 marks; and a general category involving relationships with villagers, adaptability, discipline and moral behaviour, 25 marks. In addition to these 80 marks, 20 marks are available for satisfactory completion of the village survey.

Students who are granted less than 50 of the available 100 marks will fail the NDS requirement and have to complete another year of service satisfactorily if they wish to continue their academic studies. 50-69 marks gains a Pass grade; 70-79 a Merit grade; and 80-100 a Distinction grade. The highest scoring male and female students each receive a National Development Service medal and Rs.500/- in cash.

Analysis of the marking system shows that, although it would be possible for students to gain a Pass or even Merit grade by undertaking only teaching and the village survey, to ensure a good grade they need to be active in village development activities as well. The grading is based upon collated reports of the headmasters, District Education Office Supervisors, and the NDS staff members. Nine separate reports are involved. Students travel to their districts escorted by an NDS staff member or co-ordinator, who then spends one month introducing the

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students to appropriate local people and then visiting the students in their respective villages. These visits produce the first reports. The headmasters file reports for the second, fifth and ninth months; District Education Office Supervisors, for the third, sixth and eighth months; and visiting NDS staff members for the fourth and tenth months - making a total of nine reports for each student.

Special efforts are now being made to improve the pre-training programmes, and to develop support materials in the form of illustrated booklets covering a wide range of village development activities.

It is anticipated that the National Development Service will be brought to the Diploma level in the near future, and should then involve some 2,000 students.

THE ROLE OF PEOPLE'S OPEN UNIVERSITY,
ISLAMABAD, PAKISTAN

by W. M. Zaki

1. Education and development

The connection between education and development in backward countries has been the subject of a number of studies in recent years. There can be little doubt that education and development are mutually interactive, or that any attempt to bring a society up to acceptable standards presupposes a massive effort to educate its members to improve their productivity and the quality of their lives.

The complete eradication of illiteracy in Pakistan might be an ideal impossible of realization within the present context, because the vast mass of the people have neither need nor desire to pursue learning for its own sake. Some visionaries have asserted that literacy per se is no longer crucial, that with the use of modern machines like the radio, television, tape-recorder, calculator, telephone and films, it should be possible to circumvent literacy and impart knowledge directly to people who have neither time nor opportunity to master and employ the troublesome skills of reading and writing.

The People's Open University (POU) is uniquely placed to help the national effort on all counts. Whatever qualitative resources of literacy or semi-literacy are available in the country will be tapped through a variety of teaching strategies which call to their aid the virtually unutilized potential of our mass-media facilities. While accepting the premise that universal literacy is the ultimate goal, POU proceeds also with forms of living and enhancing people's output, remaining cognizant always of the qualitative and quantitative factors operative in the society. It proceeds, likewise, on the belief that education is one of the inalienable rights of man.

2. Educational facilities

Population pressure. The education system of Pakistan mirrors the social structure that prevailed in the colonial era. After Independence it did improve and expand but not commensurately with the rapid increase in population.

Dr. W.M. Zaki was until recently Vice-Chancellor of People's Open University. A preliminary report on POU appeared in *Education in Asia* No. 6, September 1974.

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With a growth of $3\frac{1}{2}\%$, Pakistan's population is increasing by more than 2 million a year. This means that for the additional population alone there will have to be 300,000 places in primary schools, 200,000 in secondary and 100,000 in colleges which will require an additional annual expenditure of about rupees 100 crores (US\$100,000,000). With such a great additional burden, the country would find it difficult to effect significant improvements in educational facilities and make provision for educating those who grew into adulthood with only a limited education or no education at all.

Inadequacy of the formal system. The formal education system of Pakistan caters to the needs of only a limited portion of the population. Over 55 per cent children of primary-school age do not attend school. At the middle (lower-secondary) stage this percentage is 75 and at the high (upper-secondary) stage it is 85. At the third (higher education) level, only 4 per cent of the age group is enrolled.

The existing facilities are inadequate even for those who are formally enrolled in the primary and secondary schools and the universities and colleges. Primary school facilities fall far short of the aspirations and needs of the people. Secondary schools continue primarily to serve as a gigantic sorting machine, the passage through which selects about 10 per cent of children for entrance to the colleges. The colleges in turn pursue the sorting process even more ruthlessly. The students completing four years of college education form about 2 per cent of the age group. The facilities available at the post-graduate level are extremely low compared to other countries. The students who drop out on their way from primary school to the university constitute a large frustrated group, most of whom spend the rest of their lives in a sort of aimless wandering.

The prime need of the hour, therefore, is that the facilities in the existing institutions be standardized so that a sound programme of education could be given at least to those who somehow see their way through the system. This would involve the outlay of colossal amounts requiring great effort and sacrifice by the nation. There is, therefore, hardly any scope for the rapid expansion of expensive formal education facilities to accommodate the mounting pressure for additional places.

Need for lifelong education. The educational needs of the population dropping out of the system at various stages during their passage from the primary school to the university have been ignored so far. The existing system does not re-admit them, and in fact is not equipped to provide them with any fruitful programme of further education and training. It is imperative that alternative means be found to meet the educational needs of this vast segment of the population who terminate their studies without completing specific stages. Even those who finish certain

stages of education would need further education so that they could become more effective in their vocational pursuits and add to their knowledge and understanding in keeping with the rapid changes that are taking place in today's world.

3. POU and other universities

The programme of POU differs from that of other universities by virtue of its flexibility as distinct from the rigidity of traditional curricula. It presents for young people and adults who have completed their regular education, or have dropped out before its completion, an extension of opportunities to educate themselves by means of reading and study on their own.

The main characteristic of the programme of POU is the freedom enjoyed by those pursuing the courses of interest to them whether it be general education, trades or specialized techniques, without being subject to regular classes, time-tables, syllabuses, sequential patterns or any of the other restrictions of formal institutions. The learning process is thus genuinely individualized, and personally motivated.

Distinguishing features. The distinguishing features of POU are:

- Students of POU would not come to stay on its campus. There would, however, be study centres conveniently located which the students would visit in their free time for consultation with their tutors.
- POU would have full-time professors and lecturers but they would not normally lecture. Instead they would write courses, prepare reading and broadcasting materials, make broadcasts and conduct examinations.
- It would be primarily a correspondence university where students would study independently while working on their jobs and staying in their homes. They would receive learning material and would return their work to their tutors through the post.
- It would broadcast television and radio lessons fully integrated with written material and home experiment kits, supplied to the students beforehand. It would cater to the educational needs of adults (over 18 years) who would largely be in employment or self-employed.
- POU students would be able to proceed at their own pace. They would normally take eight years to get a degree after matriculation. It would be possible for a student to go fast or slow, to take any combination of courses, to retake only failed courses again and again, to drop out and drop in at his convenience.

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- It would give standard education at less expense. It would have economies of scale by enrolling large numbers of students but without having lecture theatres, laboratories and hostel facilities (the traditional universities provide residential facilities, lecture theatres and laboratories to their students; these facilities however remain grossly underutilized).
- The major part of the programme of POU would comprise post-experience non-degree courses for adults already engaged in various vocational activities.
- It would be possible for POU to avail of the services of eminent teachers, scholars, scientists and professionals employed in other universities, institutions and agencies on a part-time basis. In this way, leading personalities would be brought in to develop the courses and materials of study, broadcast them over the national networks, guide the students in study centres and finally assess and evaluate their achievements. The knowledge of the best teachers, scholars and scientists in the country would thus be made available to vastly wider audiences. A distinguished teacher who normally might be heard only by a handful of students in a traditional institution would broadcast to lacs¹ of students of POU.

4. Cost-saving features

The realities of resource constraint and the inability of formal education to cope with the burgeoning and diverse kinds of demands on education have prompted the establishment of the People's Open University. POU recognizes that education need not be equated with schooling or measured by years of exposure to schooling. What is important is learning regardless of where, when and how it occurs. The appeal of POU lies also in its comparatively low cost.

Economies of scale. The major element in the present educational crisis is the trend of ever-rising educational costs. A break-through is needed here to limit the increases and begin to reverse the process in terms of unit costs.

One possibility is to extend the present limits to the economies of scale prevailing in formal education. Employing newer media and self-instructional methods offers this prospect. The same correspondence material, the same radio and television broadcasts of certain educational courses can be used simultaneously and repeatedly for as many people as are interested. These courses may be broadcast all over the country with proportionally little additional cost.

1. A *lac* is an Anglo-Indian measure of quantity equalling 100,000.

Physical facilities. No full-time classroom or hostel facilities would be needed by POU as the students would stay at their homes and receive instruction through mass-media. Some POU courses would rely heavily on correspondence texts, and would not require physical facilities. Workshops and student guidance sessions would be conducted using the facilities of existing institutions during off-hours.

Student costs. Learning activities would be held when students are not engaged in their daily economic pursuits. This would bring costs of incomes that are lost down to tolerable levels. As the students would be staying at their homes there would be much less maintenance cost on their board and lodging.

5. Main clientele

The university offers great opportunities for the educational, cultural, social, economic, and political advancement of the people. POU would have a large clientele made up of young people and adults who have left school early and would like to complete their education or to have further education in a particular discipline. Major groups which could benefit from the programmes of POU would be teachers already working in the schools, people in industrial and technical fields, farm workers spread all over the country and young people or adults wishing to gain some knowledge in the arts and sciences in their leisure time.

Teachers. The education and training of teachers is an index of effectiveness of schooling. In Pakistan, the majority of the teachers need more knowledge of new information in their subject matter as well as methods and techniques of imparting instruction.

The POU is developing programmes which would provide opportunities to in-service teachers to take up studies in the areas of their specialization as well as study in teaching skills. The working teachers would be able to stay in their classrooms while they pursue their courses with POU. In fact there is no other way to increase the knowledge and skills of about 200,000 school teachers throughout the country except through the programmes of POU launched through the media of correspondence, radio and television, followed and supplemented by tutorial services at the study centres and workshops during vacations.

POU would need, however, the assured financial backing of the Federal Ministry of Education for meeting the heavy cost involved in developing and launching more than two dozen courses for these 200,000 school teachers. The active support of Provincial Education Departments would be necessary to provide appropriate incentives for the teachers so that they willingly embark upon a programme of lifelong education. It would also need close collaboration between the existing teacher training institutions and colleges of Arts and Science in Pakistan so that their facilities could be utilized for tutorial purposes and summer workshops.

Special reports

The degree of success of the programme would depend upon the extent of co-operation it receives from these three agencies.

Industrial workers. Lifelong education is a fundamental requirement for developing countries like Pakistan which, while backward in their educational development, have made a start on the road to industrialization. It is urgently necessary to provide periodic training courses for workers and technicians needing to learn new industrial processes and techniques which are constantly changing.

Farm workers. The farming population of Pakistan is spread over rural areas and is difficult to reach. Although hard-working, they are greatly deficient in their knowledge and understanding of the science of crop production, animal care and land management. They are also not well versed in the use of modern farming equipment. They are particularly deficient in the judicious use of fertilizers and pesticides. POU is probably the only institution by which they can be reached, motivated and educated with a view to helping them improve their farming practices. The University is developing functional courses in crop production, livestock care, use of fertilizers, and pest control as well as in special fields such as dairy farming, poultry farming, bee keeping and sericulture.

6. Challenge and opportunity

Nature of courses. The POU enterprise is a great challenge and an equally great opportunity. The first challenge lies in the task of planning and programming the courses to be offered in different sectors and at different levels. The courses must meet the demand of economic development and must ensure equivalence with the standards of the formal education system - while maintaining the conditions of freedom, flexibility and individualization that characterize this kind of education.

Mass media. Pakistan possesses fairly well-developed mass media facilities of printing presses, newspapers, radio and television. All these media have potentially important uses in education. At present, the country does not make any significant use of these facilities in support of systematic educational programmes. The educational approach of POU, which relies primarily on mass media technology, has the potential of cutting down educational costs and extending educational opportunities to large audiences mainly through economies of scale. Active co-operation and collaboration of the managing agencies of these great potential resources with the programmes of POU is imperative. It is desirable that the University should have all the teaching components under its direct control so that financially and administratively it has maximum freedom to deploy them as it wishes. A long-term arrangement with the Pakistan Broadcasting and the Pakistan Television Corporations, while undoubtedly advantageous at present, might in the

long run act as a disincentive to the best utilization of these media in the programmes of the University.

Facilitator of innovation. The diversity of teaching methods employed, the variety of subjects taught and the heterogeneity and size of its student body offer a unique opportunity to understand more about the process of learning and hence about teaching. The country has in the very character of the POU a powerful resource of educational innovation and stimulation that needs careful nurturing by the Ministry of Education.

Conditions for success. For the success of the University, certain minimum conditions should be fulfilled. Some of these are:

- The need for the People's Open University system should be publicly recognized by all concerned agencies and institutions.
- There should be a demand large enough to justify the heavy initial expense in setting up a system of this kind. A critical mass of students must be there for POU to benefit from the economies of scale.
- A combination of media should be readily available to be employed in the programmes of the University.
- POU would need the facilities of existing educational institutions for its field operations. The availability of these facilities should be ensured by the Provincial Education Departments.

We are confronted with a vast vista of prospects and potentialities. To succeed, however, the POU will require an understanding of the diverse management and sponsorship responsibilities involved in the process. It is earnestly hoped that such an understanding will be forthcoming.

DOCTORAL FELLOWSHIP PROGRAMME IN THAILAND

At the Institute for the Promotion of Teaching Science and Technology (IPST) in Bangkok, Thailand, a doctoral fellowship programme has been developed to stimulate and encourage decision-oriented research in Thailand in the area of science and mathematics curriculum improvement. The programme is funded by the United Nations Development Programme (UNDP) through Unesco fellowships awarded to IPST personnel and Unesco consultancies awarded to supervisors from the co-operating universities in United States and Australia.

The students are selected by the Director of the IPST who is assisted in this responsibility by an advisory committee. Selection criteria include commitment to the objectives of IPST and potential for completing an advanced degree in an overseas institution. At approximately the same time as the student is selected, a co-operating overseas university and a faculty member (supervisor) are contacted and preliminary enquiries for admission of the student to that institution are made. Finally, the student is nominated through the Ministry for a Unesco fellowship to cover the training scheduled at the selected institution. On receiving the fellowship award, admission arrangements are completed and the student travels to the co-operating university where he is expected to complete most of the required course work, pass qualifying examinations and prepare an acceptable thesis proposal. A faculty member from a Thai university or from a research establishment in Thailand is selected by the IPST Director in co-operation with the overseas supervisor to serve as the co-supervisor of the student's doctoral research. This co-supervisor visits the overseas university to assist the supervisor and guide, assist and direct the student through the preparation of his research proposal. At the end of approximately two years of residence at the overseas university, the student returns to Thailand and begins conducting his research. It is expected that the student will complete his research effort within from six to nine months and return to the overseas institution for the same length of time to prepare the final draft and defend his doctoral thesis. During most of the time the student is in Thailand his co-supervisor will be his major adviser. The student's overseas supervisor will visit IPST for one or two months during the student's field work period.

The first cycle of the programme began in June 1973, and seven graduate students are now studying for doctoral degrees in four

Through courtesy of Dr. Poj Sopianchai and Dr. G.H. Aylward, Institute for the Promotion of Teaching Science and Technology (IPST), Bangkok.

universities in the United States and Australia. The Deputy Secretary-General of the National Education Commission (NEC) is Chairman of the IPST Co-supervisory Committee, and has recently completed a visit to each co-operating university to discuss research proposals with supervisors and students.

At the University of Maryland, one student has completed his qualifying examinations and is doing his research in Bangkok on the classroom verbal behaviour of teachers presenting the new IPST chemistry curriculum. Another teacher has just returned to Bangkok from Maryland and is engaged at IPST in collecting data on the mathematical abilities of Thai students at several grade levels. Her supervisor will come to Thailand later this year to oversee her research and will work with the secondary maths team at the same time.

The first candidate studying at Monash University is doing research on the cognitive preferences of students studying IPST physics. While at Monash in November he studied the change-over, in several states in Australia and New Zealand, from centralized examinations to internal assessment by the schools. The candidate has run pre-tests in grades XI and XII physics in Thailand and will conduct post-tests in January 1977. The second doctoral candidate is now studying at Monash and will carry out her field work in physical science in Thailand in 1977.

The doctoral programme of one candidate attending the University of Indiana is in the field of educational psychology, while the other candidate is investigating the development of programmes in earth science to be integrated into general science and physical science curricula.

The doctoral fellow at the University of Texas at Austin is examining the IPST biology programme in terms of classroom activities and attitudes.

In addition to providing overseas research training for competent curriculum developers, the IPST Unesco doctoral fellowship scheme aims at:

- a) Developing close working relationships with overseas researchers and their centres ;
- b) Providing further training of national experts in supervising higher degree students ;
- c) Stimulating and encouraging decision-oriented research relevant to curriculum development in Thailand.

Our hopes of achieving our objectives are high. Our overseas supervisors are recognized international authorities in their fields, and most have had experience at our Institute in Thailand. Our students have proven their ability as curriculum developers ; and our co-supervisors are devoted competent educators in this community.

INDIA: WORK EXPERIENCE BUILT INTO CURRICULUM

India. National Council of Education Research and Training. *The curriculum for the ten-year school - a framework*. New Delhi, 1975. 53 p.

The Ministry of Education and Social Welfare appointed an expert group in 1973 to develop a curriculum for the 10+2 pattern. After wide national consideration of an Approach Paper on the subject and a national conference, the present document was produced as a framework to guide the individual States in their development of the curricula for the 10+2 school system.

Of special significance are the salient recommendations made in the document. It stresses flexibility within a framework of acceptable principles and values, and provides for considerable freedom for teachers and other curriculum workers to adapt the curriculum to the needs of the individuals and the community. Emphasis is also given to a curriculum related to the life, needs and aspirations of the people, with particular reference to national integration, social justice, productivity, modernization of society, and cultivation of spiritual values. Work experience has been given a central position in school education. A determined effort is to be made to break the dichotomy between work and education. While the three-language formula (mother tongue, Hindi, English or other foreign language) is to be utilized, as far as possible, primary education will be in the mother tongue. Provision is also made for artistic expression and physical education.

Further guidance is provided in respect to teaching methodologies stressing higher levels of knowledge, as well as skills and attitudes, evaluation, instructional aids and materials, courses of studies and time allocations.

As assistance to curriculum developers, objectives by stage of general education have been identified for the primary, middle and lower secondary stages (grades I-V, VI-VIII and IX-X), supplemented by instructional objectives and content outlines by subject for these same stages.

Sciences in primary grades are to be taught as Environmental Studies in grades I and II as a composite course including both

the natural and the social environment. Later, in grades III-V, a bifurcation takes place, as Environmental Studies I (Natural Science) and Environmental Studies II (Social Science).

In regard to Work Experience, at the lower primary stage, a beginning is to be made with simple, creative, self-expressional activities performed with locally available material and simple tools. In the upper primary and the secondary stages, the use of a variety of tools may be introduced. Work Experience areas should be identified through community surveys and, whenever necessary, the expertise of artisans and mechanics should be utilized for the programme. In technologically-oriented work experience, the desired level of skill and precision should be attempted. In order to provide the learners with experience in a number of areas of work, it is suggested that each successive semester may consider kinds of work experience. Learners may be given the opportunity of specializing in a particular area of work by following it successively at different levels. In grades IX and X it would be desirable to provide experience of working in a farm or factory. Work experience should be viewed as a basis for integrating knowledge obtained in the classroom, and should provide the pupil with a chance to obtain earnings in cash or kind.

The introduction of a second language may be considered at the primary or middle stage, with the third language in grade VI. All three languages are to be continued to the end of grade X. No language should be treated as optional and non-examinable during the school stage.

A proposed structure of school work is as follows:

- Grades I-II : First Language, Mathematics, Environmental Studies, Work Experience/Arts, Health Education and Games.
- Grades III-V : First Language, Mathematics, Environmental Studies I, II, Work Experience/Arts, Health Education, Games.
- Grades VI-VIII : First Language, Second Language, Mathematics, Social Science, Science, Arts, Work Experience, Physical Education, Health Education, Games.
- Grades IX-X : First Language, Second Language, Third Language, Mathematics, Social Sciences, Science, Arts, Work Experience, Physical Education, Health Education, Games.

A minimum of 240 working days are planned per year, out of which 220 days are for instruction and 20 days for school camps or community or other service. Instructional time at the lower primary grades

India: Work experience built into curriculum

may be 3-4 hours a day, while at the upper primary and middle grades not less than 5 hours.

In grades I and II, First Language, Work Experience/Arts and Health Education/Games are each provided 25% of the time allocation with 10% for Mathematics and 15% for Environmental Studies. In grades III-V, First Language has 25% of the time available, with Work Experience/Arts and Health Education/Games 20% each, Mathematics 15% and Environmental Studies I, II, 10% each.

For grades VI-X, schools will operate 6 days per week with 48 periods provided, each of 30-40 minutes. The time allocations for grades VI-VIII are (in periods) First Language 8, Second Language 5, Mathematics 7, Science 7, Social Science 7, Arts 4, Work Experience 5, Physical Education/Health Education/Games 6. In grades IX and X the allocation will be First Language 6, Second Language 5, Third Language 2, Mathematics 7, Science 7, Social Science 7, Arts 3, Work Experience 5, Physical Education/Health Education/Games 6.

The last portions of the document provide detailed guidelines on methodologies of teaching the various subject areas, according to stage of education; the development of instructional aids and materials; evaluation and feedback, with emphasis on continuous evaluation; and implications for implementation.

OUTCOMES OF PRIMARY EDUCATION IN THE PHILIPPINES

Philippines. Department of Education and Culture. *The outcomes of Philippine elementary education; a report of the major findings of Project SOUTELE*. Makati, Rizal, 1976. 96 p.

The Report is an attempt to meet the need for adequate empirical data which may undergird the development of elementary (primary) education in the Philippines. It is designed to provide information which would be useful in policy formulation, educational planning, restructuring of curricula, and redirecting methodology, staff and physical facilities development.

Project SOUTELE consists of two phases. The first of these is intended to measure and analyse the learning outcomes in grades V and VI, and the second in grade IV. The above Report covers the first phase of the Project.

After a series of extensive and thorough pre-trials, three sets of research instruments were developed for the Project:

1. A group of achievement tests was designed to measure the outcomes of primary education in terms of the major curriculum areas: Language Arts, Mathematics; Science; Social Science and Work Experience. These tests were prepared with regard for the major objectives and specific learning outcomes of each subject. In addition, a non-verbal mental ability test was prepared to measure association; ability to sense logical relationships; perceptual ability; ability to use special imagery in manipulating patterns of different forms and in different positions; and ability to do reasoning without the use of language.

2. For the purpose of measuring levels and types of affective learning, a Likert-type Student Attitude Inventory was developed. Specifically, the inventory was constructed to measure the extent to which affective objectives in social studies and work education have been achieved.

3. Questionnaires were developed to gather data on the social and economic characteristics of primary school pupils, their teachers, their headmasters, and their schools.

The respondents in the Project were selected by means of a stratified random sampling procedure, with the sampling unit a complete primary school. For each school, 40-45 grade VI students were

randomly selected with an approximately equal number of boys and girls. In addition, five fifth-graders per school were randomly selected as a control group. The sampling of schools was stratified by region, by division, and by district. Of the proposed sample of 600 schools, a total of 586 schools were tested. The tests and questionnaires were administered about one month before the end of the school year, just before the final examinations.

The Report organizes the data analysis in an input-output system, and goes beyond mere analysis to critical explanations and interpretations. Under 'Resources of elementary education', the objectives of the system, the physical resources, profiles of school staff, attitudes towards innovation, socio-economic characteristics of the learner population, and communication skills are presented. Under 'Scholastic achievement and learner attitudes', the Report presents grade-level variations, subject-area achievements, learner attitudes, teacher-related attitudes, school-related attitudes and self-related attitudes. It also reviews the reliability and validity of the test instruments, the quality of the sampling, and the various hypotheses on which the design was based.

A major section of the report considers the factors associated with academic achievement: general mental ability and achievement test scores; sex, ethnic identity and academic achievement; regional variations in academic achievement; variations in academic achievement by type of institution; parental education, family income and academic achievement; and teacher evaluation and academic achievement.

Among the conclusions of the Report are the following. Physical resources of primary schools in the sample are considered barely adequate by teachers and headmasters. The only resources rated adequate are those the teachers used in the classroom, many of which they themselves had provided. According to current credential standards, teachers and administrators are generally adequately qualified. Teachers possess positive attitudes towards their work, the community they work in, and their pupils. Educational innovations are considered important by teachers and school heads, although they expressed misgivings regarding the manner of dissemination. As anticipated, there are clearly distinct sub-groups of pupils within the primary school system, characterized by parental educational attainment, exposure to informal educational institutions, and levels of family income.

Under 'Outputs of the system - scholastic achievement and pupil attitudes' - while the achievement scores of sixth graders were higher than those of fifth graders, the magnitude of the differences was much too small to be of practical educational significance. The Report deals extensively with possible explanations for this, including technical difficulties of the research instruments, and has offered five explanatory

hypotheses (technical instrumental faults, learning plateau, curriculum redundancy, failure to specify grade-level objectives, failure of the system), concluding tentatively that all of them may be operative, and stressing the need to determine the relative contribution of each of the implied explanatory variables for purposes of establishing the priorities for educational reform and development.

The Survey indicated that the lowest levels of achievement were in such fundamental areas as reading, language and mathematics. Attitudes toward school and teacher were generally unrelated to each other, but both had a positive relationship with academic achievement in all subject areas. The pupils' self-evaluations were not related to their attitudes towards either teacher or school, and self-evaluation was inversely related to achievement scores.

Analysing the factors associated with academic performance, the Survey found that scores on the general mental ability test correlated highly with achievement test scores. The correlations were highest with science, reading and language. The analysis of ethnic and regional factors revealed systematic co-variations with academic achievement scores. Socio-economic factors had a substantial impact on levels of academic achievement. Attendance at a pre-school institution and the type of primary school entered, for example, formed criteria for groups of pupils whose average achievement levels were significantly different from each other. There was also a positive and significant relationship between achievement scores and the socio-economic status of the pupils' families as measured by parental education and income. Teachers' evaluation of pupils was an important determinant of academic performance.

The factor analysis has led the authors of the Report to suggest that the outcomes of primary education, at least insofar as they are measured by achievement tests, are significantly affected by factors that are outside of, and often beyond the control of, the education system.

The Report concludes with a number of practical and significant recommendations:

- that a programme of compensatory and remedial education be developed to overcome the learning disadvantages of pupils with rural and low socio-economic backgrounds; that this programme be developed as a compound unit which includes inputs of physical resources, specialized teacher training, the setting-up of learning objectives and educational processes relevant to rural and depressed urban areas; that these programmes be developed as long-term projects rather than short-term 'impact' activities; that teacher education programmes include larger components designed to develop awareness of the basic principles of human development and the learning processes of children.

- that a national inventory of physical resources be undertaken to determine criteria for a rational allocation of school resources, given variations between regions and among schools and the constraints of the national budget; that the findings of this study be translated into a five-year programme for bringing all schools up to the standards set; that a recommendation be made to the National Economic Development Authority (NEDA) and to the Budget Commission for the salaries of teachers and other school officials to be proportionally adjusted to meet increased living costs.
- that a one-year moratorium be declared on any major curricular change in the elementary (primary) education system; that a comprehensive review be undertaken to evaluate the non-teaching activities of teachers and the extra-curricular activities of students in relation to basic functions proper to primary education; that a comprehensive review be made of supervisory activities within the primary education system in relation to their actual impact upon the upgrading of instructional competencies; that all teacher-education programmes, both pre-service and in-service, be evaluated with regard to their effectiveness in familiarizing teachers and administrators with the basic concepts of educational innovation and in developing favourable attitudes towards change.
- that a comprehensive review be made of all educational innovations that have been implemented within the last ten years in relation to: the relevance of these changes to the objectives of Philippine primary education; the professional competence of the present staff to implement these innovations; the availability of instructional resources required for the implementation of these innovations; the changes in the structure of the whole system which are implied and required for the successful implementation of these innovations; the possibilities of integrating these changes into existing structures in order to prevent work overload among the staff.
- that priorities in the learning objectives of primary education be determined in detail; that the objectives for all learning areas at all grade levels be re-examined and analysed in relation to the system's priorities; that a study be made on the feasibility of integrating subject areas as a means of simplifying the primary school curriculum; that teacher-education programmes include components designed to communicate the objectives and priorities of primary education and develop favourable attitudes towards them; that performance evaluation indicators both for students and staff be developed in relation to the objectives of primary education.

- that a statistical 'minimum learning package' (MLP) which would define the learning continuum for the whole primary school programme be developed along the idea that basic to an individual's capacity for effective participation in the fundamental social processes is an appropriate mix of literacy and numeracy, as well as citizenship and life skills and desirable attitudes and cultural values in a changing society; that a study be undertaken at every grade level to determine what portion of the learning continuum is the responsibility of each subject and grade teacher; that the 1970 revised elementary (primary) education programme be restructured to make it (a) more responsive to present needs, (b) less subject-centred and over-crowded, (c) more adapted to flexibility in scheduling, and (d) more development-oriented.
- that studies be conducted on the following factors that affect students' academic performance to provide a basis for conscious planning and decision making: teacher characteristics; school environment; attendance in pre-primary class; health and nutrition; urban and rural residence; socio-economic status of family; cultural and linguistic background.
- that other agencies, research groups and scholars be engaged to undertake studies on available educational data, such as those gathered by Project SOUTELE, and that the education budget should provide adequate funds for research on the elementary education system.

SINGAPORE EXPERIMENTAL SCHOOLS

Cheong, Lum Peng. *Report on the Experimental Schools, Institute of Education 1974-1975*. Singapore, Department of Experimental Schools and School Practice, 1975. 81 p. mimeo

This report can be divided for discussion purposes into four sections: (1) a review of the aims of the programme; (2) an overall description of the operation of experimental schools and resource centres; (3) a brief account of 13 individual teacher centres and demonstration schools; and (4) five reports, printed as appendixes, on projects conducted at various schools on topics of interest to teachers and administrators.

Seventeen primary and two secondary schools in Singapore were adopted as experimental and demonstration schools by the Institute of Education in November 1973 after an agreement had been reached with the Singapore Ministry of Education. The functions of these schools are:

1. To conduct controlled experiments;
2. To evaluate the results of experimentation;
3. To hold demonstration lessons for students of the Institute;
4. To make case studies of specific school problems; and
5. To attempt to raise the quality of work.

The objectives of this innovation, as explained by the director of the programme in the preface to the document, are cast in a particular philosophy. The aim is not to change indiscriminately all traditional practices, particularly the effective ones; but rather to explore areas where there is evidence that change is needed and then to proceed co-operatively and scientifically. Control and evaluation are stressed to ensure that at the conclusion of an activity both in process and product there is a scientific understanding of what has taken place and that further progressive steps can be taken.

An additional aspect of this programme relates to the diffusion of what is being learned and accomplished. It is the personal interaction and co-operation between the Institute and teachers and administrators in the experimental and demonstration schools which is perceived as critical. The teachers must authentically participate in the hard work of identifying problems, devising creative solutions, and implementing them. And it is suggested in the preface to the report that there is no

possible way to circumvent this process: "The experimental schools of the Institute have no intention of generating the production of curriculum 'packages' for distribution and for trial by other schools. It is considered far more important that teachers should identify themselves with the spirit of the project they intend to adopt and make use of the various available resources to support their teaching."

The experimental and demonstration schools serve as a base for the Institute staff to work on the everyday practices and problems of education in active collaboration with the teachers, to bring theory and practice closer together. These schools are not used as sites for practice teaching of students. Institute personnel, however, are required to teach at these schools for a portion of each year in order to maintain attention on the true realities of life in the classroom. The experimental and demonstration schools are not guaranteed to succeed because of special financial assistance, especially qualified teachers, or preferential bureaucratic treatment; they enjoy none of these. The staff of the Institute are active where advice is desired and needed.

The administrative relationship between the Institute, the schools and the Singapore Ministry of Education is an important element of the innovation. Institute staff countersign the evaluation reports periodically written by the Principals of the teachers of all the schools. The Director of the Institute reports on the performance of the Principal to authorities within the Ministry. In all other administrative areas except curriculum, however, the Ministry of Education has authority. In the area of school finance, the Institute may make recommendations for expenditures for equipment and apparatus necessary for support of the educational programme.

On a pilot project basis in 1974 the Institute began building Teacher Resource Centres in selected experimental schools. The objectives of the centres as stated in this volume are:

1. To provide a setting where teachers can explore curriculum materials and new teaching techniques;
2. To provide space and equipment for the production of teaching and learning aids;
3. To involve teachers in curriculum development - especially mathematics, science and language; and
4. To serve as a meeting place for teachers, lecturers and school advisers to discuss problems of mutual interest, to exchange professional ideas and to share their experiences.

The resource centres, although relatively small and in operation for only two years, have developed strengths in particular curricular areas including science, maths, language, slow learners' programme

and 'education for living'. Planning of all centre activity is conducted by the teachers themselves and, for the most part, practical projects which solve classroom problems are the business at hand. For example, teachers meet at centres to produce new curriculum material in mathematics when it appears that students are having particular difficulties. Various kinds of meetings are held at the centres including, for example, workshops on behavioural problems confronted in the classroom, discussions of new educational proposals, or promoting useful linkages between different schools and teachers working on similar problems.

The section of the report on teacher centres and demonstration projects refers to a wide variety of projects; some descriptions are rather brief. The topics include maths, science, reading, remedial reading, oral English at home, the counselling of students, teaching aids for 'education for living', attachment to experimental and demonstration schools, 'instrumental ensemble', and exhibition of teaching aids. The focus of almost all discussion is on the children and the classroom: what materials are included in the activity corner, how to counsel children who may be having social, emotional or language problems, and making tapes for use at home to supplement English language training at school are examples. In a number of instances, test results of the students in a particular project are stated.

Two of the reports in the appendixes relate to projects considered in the main portion of the volume, a project on counselling students and a mathematics project. These reports are more extensive than the descriptions in the body of the document and give research data and some evaluation.

The relationship between the Institute and the schools seems to support the mature and creative behaviour of the teachers; the school-work being done appears to be practical and useful. The large number of projects discussed will be of interest to teachers and educationists in many fields. One might wish, however, that some descriptions were more extensive and that more analysis of the projects, alternatives, and outcomes were included.

INTERNATIONAL SYMPOSIUM FOR LITERACY HELD IN IRAN

International Symposium for Literacy, Persepolis, Iran, 3-8 September 1975. *Final report*. Paris, International Co-ordination Secretariat for Literacy [1975] 39 p.

The timing of the International Symposium for Literacy held at Persepolis, Iran, is historic because it marked the tenth anniversary of the Teheran World Congress of Ministers of Education on the Eradication of Illiteracy held in September 1965. The last day of the Symposium also coincided with the celebration of International Literacy Day.

The Symposium was intended to evaluate the results of a decade of international reflection and action on the subject of literacy teaching, with a view to extending and intensifying adult literacy teaching throughout the world. Seventy-five persons from 37 countries representing international, inter-governmental and non-governmental organizations, as well as public and private institutions including the Holy See, were invited to the Symposium in their personal capacity. The Iranian Government defrayed all expenses of the Symposium.

The discussions were centred on four main themes:

1. Appraisal and lessons of ten years of adult literacy work. This was based on two background documents; one on the development of literacy work in the world since 1965, the other on the Global Evaluation of the Experimental World Literacy Programme (EWLP). The first emphasized the emergence of new trends in literacy policy and structures, methodology and personnel training, and the adoption of approaches that allow greater scope for participation. It also pointed out the possibilities and limitations of international co-operation.

The second document reminded the Symposium of the methodological difficulties inherent in an intercultural evaluation that could not be reduced to a simple critical appreciation. It pointed out that the evaluation of the EWLP has confirmed the importance of institutional or contextual factors in the organization of literacy work, with the political will of Member States emerging as a necessary condition of success. The evaluation also threw light on the contributions to methodology made by the EWLP. The discussions brought out some significant comments and observations, some of which are:

- a) There will be 900 million illiterates in the world by the year 2,000, representing 24% of the population.

- b) Illiteracy may be due to the overall failure of organized literacy campaigns or to the high rate of population growth and the inefficiency of formal education systems.
- c) While primary schooling is desirable, it is incapable of resolving the problem of illiteracy.
- d) Illiteracy is beginning to reappear in several industrial countries; many of the methods devised and implemented in the Third World could well be employed in such countries.
- e) Literacy work is a determinant factor in the process of social change; it is an instrumental variable that should not be seen as an isolated activity but should be situated in the overall context of the attempt to transform and to develop the human and the natural environment.

2. Functionalities of literacy, in view of the need to satisfy the essential needs of man in terms of economic activities, health, culture and participation in the reform of society. This theme was discussed based on three documents, namely: (i) The Functionalities of Literacy Work; (ii) Literacy Training and Mass Education for Development; and (iii) Literacy Training Education and Instruction.

It was noted that the notion of functionality had evolved in the courses of the EWLP. Functionality was associated chiefly with the direct improvement of labour productivity. This notion was subsequently broadened to encompass other dimensions.

A considerable amount of time was devoted to the re-examination of the concept of literacy training. One concept is that which sees literacy training as the "reading of the world and not merely a decoding of words." Thus conceived, literacy training seeks to further the development of the personality as a whole and to stimulate social interaction.

It was also pointed out that dialogue in itself constitutes a path to literacy which does not require a mastery of the written language. Another point raised was that literacy training ought to encourage learners to acquaint themselves with communications techniques starting with traditional know-how and equipment. A final point was that functional literacy training could well play a vital role in increasing agricultural output upon which the very survival of the Third World countries depends.

3. The determination to introduce deep changes in the living conditions of man and in social structures as a sine qua non of literacy undertakings. Four working documents were presented to introduce this theme. Reports were also given on a literacy training experiment in Somalia, and on the characteristics of an electronic machine designed to help very young children to learn to read.

It was agreed unanimously that literacy training is, first and foremost, a political matter and that, consequently, it would not be considered neutral. It was also stated that there is no such thing as a politically neutral education, technology or theology. The point was stressed that the Third World has the right to free and full access to humanity's scientific and technological heritage in its attempt to introduce changes in the living conditions of its people.

The Symposium viewed any type of educational action as tending to strengthen the learners' autonomy of decision and therefore to enhance their capacity for change. It stressed the possibility of making use of non-governmental organizations, such as co-operatives, in developing a mode of literacy training based on the active participation of workers.

It was emphasized that an initial political will at State level is needed before any attempt at popular literacy training and education can be made, this will alone being capable of setting social change in motion.

Another important observation made was that any kind of educational action founded on adult participation and conscientization presupposes a change in the decision-making process in the societies concerned.

4. Innovative role of literacy experiments in the reform of teaching and training systems and their integration into the global educational process. Most of the speakers highlighted the importance, the diversity and the significance of literacy experiments conducted in recent years. Literacy training, which used to be a marginal and neglected sector of education, has now become a fertile field of research from whose results and lessons the entire educational system may draw inspiration. They pointed out that a number of innovative approaches have been adopted some of which open up interesting prospects for improving the integration of school into society and may be used in defining the conditions for restructuring the school system.

The Symposium also noted that any coherent solution to the literacy problems presupposes an approach that integrates formal and non-formal education into a global educational system, one that is co-extensive with the duration of life itself, and integrated into the need of society and capable of permanent adjustment and review.

The remaining portion of the report deals with the drafting and approval of the Declaration of Persepolis. The Declaration itself is the most important annex to the report. The Declaration reflects the significant ideas, observations, suggestions and recommendations generated during the six-day Symposium.

IRAN: SOCIAL AND ECONOMIC PROMOTION OF WOMEN

International Seminar [on] the Design of Educational Programmes for the Promotion of Rural Women, Teheran, 19-24 April 1975. *The design of educational programmes for the social and economic promotion of rural women.* Teheran, Women's Organization of Iran/International Institute for Adult Literacy Methods [1975] 270 p.

The International Seminar on the Design of Educational Programmes for the Social and Economic Promotion of Rural Women was co-sponsored by the Women's Organization of Iran and the International Institute for Adult Literacy Methods on the occasion of International Women's Year. The general objective of the Seminar was to provide an exchange of experience and knowledge relating to the design and conduct of education programmes for rural women. The immediate objective was to obtain suggestions pertinent to the development of the Women's Organization of Iran's Experimental Functional Literacy Project in Saveh and its expansion to other areas of the country.

The 25 participants, drawn from within and outside Iran, had varied backgrounds. Many were directly engaged in literacy work; others held academic appointments. All had practical experience in the design and conducting of rural educational programmes.

The working procedures of the Seminar provided a variety of opportunities and means for exchanging information, points of view, and experiences. Presentations in plenary sessions, which were supplemented by discussions in working groups, enabled participants to examine the basic operations in the conduct of education programmes for rural women. A visit to the Saveh Project for observation and interviews presented the Seminar participants with a first-hand exposure to the workings of the Saveh Project.

Four major concerns related to the promotion of educational programmes for rural women were used as the basis of discussion during the Seminar, namely:

1. What is appropriate education for rural women?
2. How can the objectives for the education of rural women be realized through the instructional objectives?

3. How can appropriate organizational structures be created to mobilize resources and co-ordinate project activities?
4. What strategy and methods of evaluation are most appropriate for non-formal education programmes?

In considering these questions the Seminar endeavoured to keep the situation of Saveh in mind and to suggest ideas and approaches for the consideration of the project staff either in the conduct of the pilot project or its anticipated expansion to other regions.

What is appropriate education for rural women?

Men, women and children in rural areas are all less privileged in some ways than those in urban environments. Of all, it is the women who are the most deprived group. They are often subject to prejudices, traditional taboos and social inhibitions which shut them off from the advancement of the largest society. This has important implications for both the objectives and the strategies for educational programmes.

The objectives of the women's education programmes derive from their social, economic and cultural circumstances. To overcome the enormous lag characteristic of the educational situation of rural women it is not enough to direct the educational effort to a single age or occupational group. Rather, a comprehensive effort is needed, touching in some significant way, all members of the community who affect or can affect the access of rural girls and women to education and the quality and scope of such education.

While the objectives must be determined in relation to a particular context, the following objectives - suitably adapted - may apply to many rural communities:

1. To provide access to education for women so that they can participate actively in the social and economic development of the community;
2. To create a receptive environment for the advancement of women through the involvement of the whole community;
3. To offer diversified programmes to match the interests, aptitudes and needs of specific age and occupational groups;
4. To build up leadership capacities with specific training among the younger age groups;
5. To design curriculum and teaching strategies which promote confidence and initiative and develop problem-solving skills and abilities, decision-making and planning competence, and self-expressive behaviour and co-operation;

6. To promote and strengthen the economic roles of rural women through active participation in modern economic activities ;
7. To strengthen and maintain the interest and motivation of women learners by designing relevant and enjoyable educational activities ;
8. To encourage the creative ability of women through cultural expression as in music and the arts.
9. To develop effective mechanisms for bringing technical assistance and services to the village level.

Implications for the curriculum

In developing the curriculum, the following should be considered: (i) diversification ; (ii) flexibility ; (iii) content not overloaded at the cost of participation ; (iv) teaching through participation, enquiry and expressive methods rather than through lectures or other didactic methods ; (v) teacher training conducted through similar participatory methods ; (vi) alerting teachers to the need for and ways of drawing upon community resources to strengthen programmes and render them relevant to a given rural situation ; (vii) mobilization of other sources and services in support of the programme ; (viii) effectiveness of supervision and support services.

The Saveh project represents a useful beginning and a very good field experience to gain insights into the problems of designing and conducting educational programmes for rural women. The Seminar recommended that the project be expanded in careful stages. In expanding the project, consideration should be given to: (i) development of educational activities for men ; (ii) involvement of the community-at-large in educational activities ; (iii) training of teachers in active methods that involve the learners in enquiry, problem-solving and self-expression ; (iv) evaluation to provide needed feedback ; (v) curriculum content that reflects the needs of the participants ; and (vi) co-ordination of resources and technical services.

Organization

The importance of organization to the successful conduct of programmes of non-formal education was stressed. It was realized that, with the expansion of the programme, a national project office should be established to provide policy direction, procure and allocate resources and provide support to all the activities of the project.

Evaluation

The Seminar noted with approval the careful consideration being given to evaluation by project authorities. It was observed that the

evaluation of non-formal educational programmes presents particular difficulties and subtleties. This is especially true when, as in Saveh, the educational action is considered as a step toward the economic and social development of a community and its members.

It was recommended that the evaluation continue to give consideration to both the intended and unintended consequences of the programme. An evaluation strategy based upon a constant monitoring of a selected number of critical indicators and the use of special enquiries into problem areas was suggested. The possibility of using information collected for programme management for evaluation purposes was also noted.

NOTES ON ASIAN DOCUMENTS

The Educational Documentation and Information Service of the Unesco Regional Office for Education in Asia continues to build up its documentation resources, which include a major collection of publications on education in the Asian region. The following notes signal some interesting documents recently received.

India. Ministry of Education and Social Welfare. Directorate of Non-formal (Adult) Education. *Initial reading list on adult education: books, monographs, manuals, studies relevant to Indian adult educators.* New Delhi, 1976. 55 p.

This document suggests a list of initial readings on adult education for all those who want or need to get systematic information and knowledge about the subject and gives the reasons for the preparation of such a list. The list includes about fifty titles, the selection of which was governed by the following criteria: (1) that they should make a fairly balanced coverage of five major aspects considered relevant by the Indian adult educators; (2) that the books be available in India; (3) that the titles make a fair 'mix' between Indian and non-Indian authors; and (4) that the books are at a level of concept and presentation understood by adult educators, teachers and field workers in adult education.

The books and other reading materials are grouped into five categories: (a) General framework; (b) World picture; (c) Basic orientations; (d) Indian perspective; and (e) Programmes in India. A chart listing the reading materials under these five categories is attached to the document. The remaining portion of the document gives brief and concise descriptions of the contents of each book, monograph or manual, as listed under the five categories mentioned above.

India. National Literacy Co-ordinating Committee. *Working Paper and Recommendations of the 1st National Literacy Conference, Calcutta, 22-24 February 1975.* New Delhi, 1975. 32 p.

This document embodies the working paper placed before the first National Literacy Conference for its consideration and the general recommendations of the Conference. The paper starts with data related to the extent of illiteracy in India and analyses the courses of this problem

which are summarized as follows: (1) apathy and indifference of political forces towards public education; (2) absence of a national programme to tackle the huge problem; (3) limited number of organizations involved in adult literacy work; (4) lack of financial resources; (5) lack of sufficient theoretical and practical orientation among literacy workers; and (6) literacy campaign not integrated into the total development efforts. The paper enumerates the roles that voluntary organizations, Union and State Governments, political parties, educational institutions, workers and women's organizations, house employers and other organizations should play in the promotion of the literacy movement in India.

The participants of the Conference emphasized the close correlation between political, economic, social, cultural and educational progress and noted that India cannot progress if illiteracy does not decrease drastically and rapidly. They also underlined the need to link literacy programmes with development schemes. The Conference resolved that there is an urgent need for an active and broad-based National Commission or Board to look into the needs of and provision for adult education. The participants unanimously agreed to make an appeal to all concerned to commit and involve themselves in initiating, developing and expanding literacy programmes.

Institute for Research and Planning in Science and Education, Teheran. *Handbook for the planning of educational facilities*, by Carlo Testa and Suzan Habibzadeh. Teheran, 1975. 128 p.

This title is No. 178 of a document series published by the Institute. It deals with educational facilities in the context of educational planning and particularly with school location and optimum school size. It describes the factors involved in decision-making in relation to the preparation of educational maps having regard to educational economics, demography and social factors. The document also illustrates its methodology by reference to worked examples. In the annexes, it provides methods of data collection through sample surveys and of processing applied, as well as giving information on norms and standards for schools and school sites.

Institute for Research and Planning in Science and Education, Teheran. *Norms for the design of educational facilities in Iran*, by Carlo Testa and Suzan Habibzadeh. Teheran, 1974. 97 p.

This is No. 146 of the Institute's document series, and was prepared as part of the long-term educational plan. Being derived from the existing educational requirements of Iran observed and the anthropometric studies conducted in the country, the norms are given for the

following five areas, each one a chapter: dimensions of spaces per pupil according to each function; environmental standards of physical condition for educational space; technical specifications of standards; and a methodology for the quantitative evaluation of space utilization and cost planning.

International Co-operative Alliance. Regional Office and Education Centre for Southeast Asia. *A study of agricultural co-operative societies in Indore District with special reference to educational needs; Report*, by Dharm Vir [and others] New Delhi, 1971. 144 p.

This report is presented in two parts, Part I which is divided into four expository chapters, and Part II which presents descriptions of case studies on five service co-operative societies located in as many villages. Chapter I provides general information about the study; e.g., research design, objectives, scope, sample and tools used, field observations, collection, analysis, interpretation and use of data, and difficulties encountered in the collection of data. Chapter II gives background information about Indore District: population, castes, occupation, crops raised, livestock, poultry, industries, finances and literacy. It also provides information about primary agricultural credit societies, marketing societies, cold storage societies, and some information about the areas covered by the societies. Chapter III presents the main findings of the study related to: level of knowledge; areas of interest; employees; problems of societies and their members; members' expectations from the society; and members' proposed programmes for increased income.

Some of the recommendations of the study are: (1) efforts should be exerted to eradicate illiteracy among the members of co-operative societies; (2) the functional literacy and adult education programmes should take into account the main interests and needs of members; (3) more education about co-operative societies and the benefits derived from them should be given to the members; (4) more emphasis should be placed upon co-operative societies, and the education of members should be a continuing process; (5) in order to give maximum help to the farmers, more studies about them should be conducted.

Kee, Poo Kon. *Tertiary students and social development: an area for direct action - student rural service activities in Malaysia*. Singapore, Regional Institute of Higher Education and Development, 1976. 83 p.

The document is a product of a research project attempting to examine the impact of study-service on the social development process

in Malaysia. The Malaysian experience is compared with others, in particular in Indonesia, Philippines and Thailand. The first chapter reviews briefly the growth of higher education in Malaysia since 1819, and includes an analysis of the factors shaping the recent growth of higher education. In the second chapter, attention is paid to higher education and social development, leading on to the direct-action aspects of study-service or service-learning activities.

A discussion of voluntary rural service activities of tertiary students in Malaysia forms the content of the third chapter and covers the Student Pioneer Corps and the Teaching Force (1970); the National Student Service Corps; the Development Operation Corps; the Service Corps of the National Union of Islamic Students; Service-Learning Activities of the Science University and the Agriculture University. In these, reference is made to the objectives, modalities utilized, selection of work sites, rules of service; and financing. Chapter IV briefly reviews student service activities in a number of developing countries in Africa, Latin America, the Socialist States and Asia. In the final chapter, the future of such activities in Malaysia is briefly considered, with particular reference to structural limitations, and financial and political constraints.

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